Jeak Ling Ding et al.
Amdt. dated May 10, 2005
Preliminary Amendment

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

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yeast.

Claims 1-37 are canceled.

1	38. (New) An expression vector comripsing a vitellogenin gene operably				
2	linked to a promoter, wherein the promoter is functional in a eukaryotic host suitable for use as a				
3	feed or feed additive.				
1	39. (New) The expression vector according to claim 38 wherein the promoter				
2	is functional in yeast.				
1	40. (New) The expression vector according to claim 39 wherein the promoter				
2	is a constitutive promoter.				
1	41. (New) The expression vector according to claim 40 wherein the promoter				
2	is a yeast glyceraldehyde-3-phosphate dehydrogenase (GAP) promoter.				
1	42. (New) The expression vector according to claim 41 comprising SEQ ID				
2	NO: 1.				
1	43. (New) The expression vector according to claim 42 which is Vtg				
2	(-SS)/pGAPZA, Vtg (VTGSS)/pGAPZA or Vtg (αSS)/pGAPZαC.				
1	44. (New) A transgenic eukaryotic host suitable for use as a feed or feed				
2	additive comprising the expression vector according to claim 38.				
1	45. (New) A transgenic yeast comprising an expression vector wherein the				
2	expression vector comprises a vitellogenin gene operably linked to a promoter functional in				

46.

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2 copies of the expression vector has integrated into the yeast genome. 47. (New) The transgenic yeast according to claim 45 wherein the promoter is 1 2 yeast GAP promoter. (New) The transgenic yeast according to claim 47 comprising SEQ ID 1 48. 2 NO: 1. 1 49. (New) The transgenic yeast according to claim 48 wherein the yeast is 2 Pichia pastoris. 50. (New) The transgenic yeast according to claim 49 wherein vitellogenin 1 2 protein is expressed intracellularly. 1 51. (New) The transgenic yeast according to claim 50 wherein yeast is 2 protease deficient. 1 52. (New) The transgenic yeast according to claim 51 wherein the amino acid 2 and lipid contents are increased. 1 53. (New) The transgenic yeast according to claim 52 wherein the level of 2 polyunsaturated fatty acids is increased. 54. (New) A method of increasing the level of polyunsaturated fatty acids in a 1 2 transgenic yeast according to claim 45 comprising culturing the transgenic yeast in media comprising fish oil. 3 1 55. (New) The method according to claim 54 wherein the concentration of the 2 fish oil in the media is between about 2% and 5%.

(New) The transgenic yeast according to claim 45 wherein multiple

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1 56. (New) A method for increasing the survival rates of oviparous larvae 2 comprising the step of feeding the large transgenic yeast or an intermediate live feed that has 3 been fed transgenic yeast according to claim 45. 1 57. (New) The method according to claim 56 wherein the larvae are aquatic 2 or marine larvae. 1 58. (New) The method according to claim 57 wherein the aquatic or marine 2 larvae are tilapia larvae. (New) The method according to claim 58 wherein the tilapia larvae is fed 1 59. to 1.0 to 1.6 mg of transgenic yeast per tilapia larvae per day. 2 1 60. (New) The method according to claim 58 wherein the intermediate live 2 feed is rotifer or artemia. 1 61. (New) The method according to claim 59 wherein the step of feeding the 2 larvae transgenic yeast further comprises co-feeding with an intermediate live feed. 62. (New) The method according to claim 61 wherein the intermediate live 1 2 feed is a rotifer or artemia. (New) The method according to claim 62 wherein the rotifer or artemia is 1 63. 2 co-fed at a density of 5 individuals per milliliter. 1 64. (New) A method of increasing broodstock egg quality of an oviparous 2 animal comprising the step of feeding the broodstock the transgenic yeast or an intermediate live 3 feed that has been fed transgenic yeast according to claim 45. 1 65. (New) The method according to claim 64 wherein the oviparous animal is

an aquatic or marine oviparous animal.

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	66.	(New)	The method according to claim 65 wherein the aquatic or marine	
oviparous animal is a fish.				
	67.	(New)	The method according to claim 65 wherein the fish is tilapia.	
	68.	(New)	A method of enriching an intermediate live feed comprising the	
step of feeding the intermediate live feed the transgenic yeast according to claim 45.				
	69.	(New)	The method acording to claim 68 wherein the intermediate live	
feed is a rotifer or an artemia.				
`	70.	(New)	The method according to claim 69 wherein the artemia is an	
Artemia napulii.				
	71.	(New)	The method according to claim 70 wherein the fatty acid content	
of the artemia is increased.				
	72.	(New)	The method according to claim 71 wherein the fatty acid is a	
polyunsaturated fatty acid.				
	73.	(New)	The method according to claim 72 wherein the polyunsaturated	
fatty acid is eicosapentaenoic acid or docosahexanoic acid.				
•	74	(New)	Use of recombinant vitellogenin to deliver a therapeutic material	
		` ′	` `	
	step of feeding feed is a rotifer Artemia napuli of the artemia is polyunsaturated fatty acid is eight	67. 68. step of feeding the int 69. feed is a rotifer or an a 70. Artemia napulii. 71. of the artemia is incre 72. polyunsaturated fatty 73. fatty acid is eicosapen 74.	oviparous animal is a fish. 67. (New) 68. (New) step of feeding the intermedia 69. (New) feed is a rotifer or an artemia. 70. (New) Artemia napulii. 71. (New) of the artemia is increased. 72. (New) polyunsaturated fatty acid. 73. (New) fatty acid is eicosapentaenoic	